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Occupational Employment and Wages in Houston-The Woodlands-Sugar Land, May 2016

Workers in the Houston-The Woodlands-Sugar Land Metropolitan Statistical Area had an average (mean) hourly wage of $25.42 in May 2016, about 7 percent above the nationwide average of $23.86, according to the U.S. Bureau of Labor Statistics. Assistant Commissioner for Regional Operations Stanley W. Suchman noted that, after testing for statistical significance, wages in the local area were higher than their respective national averages in 11 of the 22 major occupational groups, including architecture and engineering; life, physical, and social science; and management. Four groups had wages that were measurably lower than their respective national averages including building and grounds cleaning and maintenance, as well as construction and extraction.

When compared to the nationwide distribution, Houston employment was more highly concentrated in 5 of the 22 occupational groups including construction and extraction; architecture and engineering; and transportation and material moving. Conversely, nine groups had employment shares significantly below their national representation, including healthcare support; healthcare practitioners and technical; and management. (See table A and box note at end of release.)

Table A. Occupational employment and wages by major occupational group, United States and the Houston-The Woodlands-Sugar Land Metropolitan Statistical Area, and measures of statistical significance, May 2016

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Houston-The Woodlands-Sugar Land		United States	Houston-The Woodlands-Sugar Land		Percent difference[1]
Total, all occupations	100.0	100.0		$23.86	$25.42	*	7
Management	5.1	4.4	*	56.74	66.77	*	18
Business and financial operations	5.2	5.3		36.09	40.62	*	13
Computer and mathematical	3.0	2.8	*	42.25	43.74	*	4
Architecture and engineering	1.8	3.0	*	40.53	50.31	*	24
Life, physical, and social science	0.8	1.0	*	35.06	41.93	*	20
Community and social service	1.4	0.8	*	22.69	24.81	*	9
Legal	0.8	0.8		50.95	60.87	*	19
Education, training, and library	6.2	5.9		26.21	25.68		-2
Arts, design, entertainment, sports, and media	1.4	1.0	*	28.07	26.07	*	-7
Healthcare practitioners and technical	5.9	5.2	*	38.06	38.32		1
Healthcare support	2.9	2.2	*	14.65	14.18		-3
Protective service	2.4	2.4		22.03	20.67		-6
Food preparation and serving related	9.2	9.4		11.47	11.35		-1
Building and grounds cleaning and maintenance	3.2	2.9	*	13.47	11.64	*	-14

Note: See footnotes at end of table.

Table A. Occupational employment and wages by major occupational group, United States and the Houston-The Woodlands-Sugar Land Metropolitan Statistical Area, and measures of statistical significance, May 2016 - Continued

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Houston-The Woodlands-Sugar Land		United States	Houston-The Woodlands-Sugar Land		Percent difference[1]
Personal care and service	3.2	2.8	*	12.74	11.39	*	-11
Sales and related	10.4	10.3		19.50	21.53	*	10
Office and administrative support	15.7	15.9		17.91	18.58	*	4
Farming, fishing, and forestry	0.3	0.1	*	13.37	12.99		-3
Construction and extraction	4.0	6.0	*	23.51	22.20	*	-6
Installation, maintenance, and repair	3.9	4.3	*	22.45	22.67		1
Production	6.5	6.3		17.88	20.50	*	15
Transportation and material moving	6.9	7.3	*	17.34	19.73	*	14

(1) A positive percent difference measures how much the mean wage in the Houston-The Woodlands-Sugar Land Metropolitan Statistical Area is above the national mean wage, while a negative difference reflects a lower wage.
Note: * The percent share of employment or mean hourly wage for this area is significantly different from the national average of all areas at the 90-percent confidence level.

One occupational group–architecture and engineering–was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Houston had 87,500 jobs in architecture and engineering, accounting for 3.0 percent of local area employment, significantly higher than the 1.8-percent national share. The local average hourly wage for this occupational group was $50.31, nearly 25 percent above the national average of $40.53.

Some of the larger detailed occupations within the architecture and engineering group included petroleum engineers (10,880), civil engineers (10,690), and mechanical engineers (8,470). Among the higher-paying jobs were petroleum engineers and chemical engineers, with mean hourly wages of $79.64 and $60.12, respectively. At the lower end of the wage scale were surveying and mapping technicians ($22.36) and civil engineering technicians ($27.53). (Detailed occupational data for the architecture and engineering group are presented in table 1; for a complete listing of detailed occupations go to www.bls.gov/oes/current/oes_26420.htm.)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See table 1.) For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area than it does nationally. In the Houston metropolitan area, above-average concentrations of employment were found in many of the occupations within the architecture and engineering group. For instance, petroleum engineers were employed at 15.9 times the national rate in Houston, while chemical engineers were employed at 6.2 times the U.S. average. Both location quotients in Houston were among the highest in all metropolitan areas for these particular occupations. On the other hand, industrial engineers had a location quotient of 1.0 in Houston, meaning that the local employment share in this occupation matched the national average.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Texas Workforce Commission.

Note

A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

Technical Note

The Occupational Employment Statistics (OES) survey is a semiannual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The OES data available from BLS include cross-industry occupational employment and wage estimates for the nation; over 650 areas, including states and the District of Columbia, metropolitan statistical areas (MSAs), metropolitan divisions, nonmetropolitan areas, and territories; national industry-specific estimates at the NAICS sector, 3-, 4-, and selected 5- and 6-digit industry levels, and national estimates by ownership across all industries and for schools and hospitals. OES data are available at www.bls.gov/oes/tables.htm.

OES estimates are constructed from a sample of about 1.2 million establishments. Each year, two semiannual panels of approximately 200,000 sampled establishments are contacted, one panel in May and the other in November. Responses are obtained by mail, Internet or other electronic means, email, telephone, or personal visit. The May 2016 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2016, November 2015, May 2015, November 2014, May 2014, and November 2013. The overall national response rate for the six panels, based on the 50 states and the District of Columbia, is 73 percent based on establishments and 69 percent based on weighted sampled employment. The unweighted employment of sampled establishments across all six semiannual panels represents approximately 58 percent of total national employment. The sample in the Houston-The Woodlands-Sugar Land Metropolitan Statistical Area included 10,147 establishments with a response rate of 48 percent. For more information about OES concepts and methodology, go to www.bls.gov/news.release/ocwage.tn.htm.

The May 2016 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2012 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at www.bls.gov/soc and information about the 2012 NAICS is available at www.bls.gov/bls/naics.htm.

Metropolitan area definitions

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Houston-The Woodlands-Sugar Land Metropolitan Statistical Area** includes Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties in Texas.

Additional information

OES data are available on our regional web page at www.bls.gov/regions/southwest. Answers to frequently asked questions about the OES data are available at www.bls.gov/oes/oes_ques.htm. Detailed technical information about the OES survey is available in our Survey Methods and Reliability Statement on the BLS website at www.bls.gov/oes/current/methods_statement.pdf.

Information in this release will be made available to sensory impaired individuals upon request. Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Houston-The Woodlands-Sugar Land Metropolitan Statistical Area, May 2016

Occupation[1]	Employment		Mean wages	
	Level[2]	Location quotient[3]	Hourly	Annual[4]
Architecture and engineering occupations	87,500	1.7	$50.31	$104,640
Architects, except landscape and naval	2,570	1.2	40.67	84,590
Landscape architects	380	0.9	32.62	67,850
Cartographers and photogrammetrists	500	2.0	36.26	75,410
Surveyors	1,550	1.7	31.63	65,780
Aerospace engineers	3,060	2.1	54.75	113,870
Biomedical engineers	220	0.5	37.67	78,360
Chemical engineers	4,110	6.2	60.12	125,040
Civil engineers	10,690	1.8	54.61	113,580
Computer hardware engineers	820	0.5	52.89	110,020
Electrical engineers	4,250	1.1	50.93	105,930
Electronics engineers, except computer	2,790	1.0	61.66	128,260
Environmental engineers	850	0.8	44.57	92,700
Health and safety engineers, except mining safety engineers and inspectors	1,450	2.7	54.58	113,520
Industrial engineers	5,270	1.0	53.75	111,800
Marine engineers and naval architects	870	5.1	56.17	116,840
Materials engineers	660	1.2	50.87	105,800
Mechanical engineers	8,470	1.4	52.77	109,750
Petroleum engineers	10,880	15.9	79.74	165,850
Engineers, all other	3,090	1.2	59.57	123,900
Architectural and civil drafters	4,320	2.1	32.39	67,370
Electrical and electronics drafters	1,060	1.9	38.22	79,500
Mechanical drafters	2,140	1.6	34.30	71,340
Drafters, all other	600	1.9	37.90	78,830
Aerospace engineering and operations technicians	310	1.3	33.87	70,450
Civil engineering technicians	2,690	1.8	27.53	57,270
Electrical and electronics engineering technicians	4,900	1.7	31.33	65,170
Electro-mechanical technicians	390	1.4	29.73	61,850
Environmental engineering technicians	160	0.5	29.74	61,860
Industrial engineering technicians	720	0.6	29.88	62,150
Mechanical engineering technicians	2,160	2.3	37.98	79,010
Engineering technicians, except drafters, all other	2,350	1.5	30.60	63,650
Surveying and mapping technicians	2,850	2.5	22.36	46,510

(1) For a complete listing of all detailed occupations in the Houston-The Woodlands-Sugar Land Metropolitan Statistical Area, see www.bls.gov/oes/current/oes_26420.htm.
(2) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.
(3) The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.
(4) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.